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ABSTRACT

An intensive case study of two student teachers focused on how their beliefs and practices developed during the student teaching experience. Ethnographic methods used included participant observation, semi-structured interviews, and analysis of journals kept by the student teachers. The Kelly Repertory Grid Technique was used to examine the beliefs of the student teacher both before and after the student teaching experience. This paper presents detailed findings concerning both student teachers. Several important hypotheses worthy of further research that involve student teachers' idiosyncratic beliefs, how beliefs change over the student teaching experience, philosophical views and educational beliefs of student teachers, and how beliefs guide the student teacher during actual practice are listed. (CB)

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The Development of the Beliefs/Practice Relationship in Two Student Teachers

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PROBLEM

Recent research in teacher education has taken two directions. One direction is exemplified by the process-product approach, the so-called teacher effectiveness research (Clark, 1979). The second direction research has taken in the last ten years concerns itself with hidden cognitive aspects of the teacher. Such research has focused on how teachers process information in their classroom environments and how teachers make decisions (Peterson and Clark, 1985). Teaching clearly involves both behavior and cognition. It is therefore logical to argue that it is necessary to use the research into teacher behaviors and teacher cognitions together in order to obtain a more complete description of the teaching process. Hugh Munby (1983) has suggested that to get a truly accurate description of the teaching process, researchers must go beyond behaviors and individual cognitions and must look at the manner in which teachers organize their thinking about teaching. Munby has looked at both beliefs and metaphors as organizing schemes employed by teachers.

It is more than just intellectual curiosity that makes such issues important concerns. If researchers hope to improve teaching, they must come to terms with what the teaching process is in order to decide how best to intervene. It seems that the most potentially important area of the three; behavior, cognitions, and beliefs is that of teacher beliefs. It is potentially the most important because it is the most fundamental. Behavior and cognition are rooted in this broader frame. Human behaviors are not isolated random acts. They are instead unified in some meaningful gestalt by the actor. For teachers, beliefs can be an important unifying factor.

What then, is the relationship between what a teacher believes and what a teacher does? This is one primary question for this study. This question can be broken down into sub-questions. To what extent do beliefs provide an organizing gestalt for actions, as has been previously suggested, and to what extent do practices influence the development of beliefs? What is the nature of any

interaction between the development of a teacher's beliefs and practices? An ideal time to explore the beliefs/practice relationship would be during the early stages of a teacher's development, for instance the student teaching experience. Because the beliefs would tend to be in a state of flux, a researcher could examine how the beliefs develop in relation to the teacher's practice and how the practice develops in relation to the teacher's beliefs.

The issue of the development of beliefs and practices of student teachers has been explored somewhat in the literature. The results have been ambivalent. There is a suggestion in the research literature that beliefs of student teachers do not change as a result of their experiences (Etheridge, James and Bryant, 1981; Nelson and Ahmed, 1972). Another suggestion is that student teachers manifest less progressive ideas by the end of the experience. For instance, Hoy and Rees, (1976) employing the use of surveys found that the student teaching experience made the student teachers significantly more custodial (stressing maintenance of order, a punitive approach, and a distrust of students) and less humanistic (stressing a more trusting view of students and a belief in their ability to be self disciplining and responsible). Griffin, et al. (1983) found that student teachers become more conservative in terms of their educational ideology. Iannacocone (1963) came to the same conclusion in similar research based on a social-anthropological paradigm. Tabachnik, Popkewitz and Zeichner (1979-80), in an interview study of student teachers found contradictory results. They reported that each student teachers' perspective which evolved over the course of the experience was complex and unique. Further, student teacher's perspectives did not change greatly over the student teaching experience. Rather, student teachers came into the classrooms with perspectives and as a result of student teaching, they were better able to articulate their beliefs and employ them as a guide for practice. A review of the literature yielded little in the way of studies which gathered data on both student

teacher beliefs and practices as a way of examining the development of beliefs and practices in relation to one another.

The narrower concerns of this paper relate directly to the student teaching experience. How do the student teacher's beliefs and practices develop in relation to one another? This is an important concern in that it will lend some insight into the broader issue of teacher's beliefs and practices. A more direct mission of this study will be to help in the improvement of teacher education. It is not clear how beliefs operate in the development of the student teacher's practice. Understandings related to this issue would have impact on the curriculum of teacher education programs, and the nature of the supervision of the student teacher by the cooperating teacher and the university supervisor. Creators of teacher education programs need to understand how to confront the beliefs student teachers bring to and develop during the program. The ultimate goal of this study is to help in the development of effective teacher education programs.

WHY AN ETHNOGRAPHIC APPROACH

This study was a hypothesis generating study. Researchers employing such an approach attempt to identify specific causal linkages between important variables. In a hypothesis generating study, hypotheses which emerge "are grounded solidly in observational data gathered in a naturalistic setting" (Borg and Gall, 1983, p. 494). Because the issues explored in this study have not been systematically studied, the need for a hypothesis generating study was deemed appropriate.

Zeichner (1978) has identified limitations of research in the area of student teaching based on the psychometric paradigm. Because of perceived limitations of such research, in the last five years, more researchers studying the student teaching experience have turned to what Zeichner refers to as the social-anthropology paradigm (Goodman, 1985; Tabachnik, Popkewitz, and Zeichner, 1979-80). In speaking of such an approach, Erickson (1986) has argued that: "Interpretive,

participant observational fieldwork research, in addition to a central concern with mind and with subjective meaning, is concerned with relation between meaning-perspectives of actors and ecological circumstances of action in which they find themselves" (p. 37-38). The questions dealt with in this study involved looking at the "meaning-perspectives" (beliefs) of student teachers in relation to their practice within the context of a particular situation. In this sense, the social-anthropology paradigm was appropriately used as the basis for this study.

METHODOLOGIES EMPLOYED TO EXAMINE TEACHER BELIEFS

A. Kelly Repertory Grid Technique

The Kelly Repertory Grid Technique (Kelly, 1955) was used as the basis for examining teacher beliefs. Munby's (1982) adaptation of Kelly's technique was employed to help subjects articulate their beliefs in the form of propositions. A belief is a cognition which links an object to an attribute (Fishbein and Ajzen, 1981). An example of such a belief might be: High-order questions (object) promote learning in low ability students (attribute). Operationally, in this study, beliefs are propositional statements following the properties of this definition: A proposition is an "idea, thought, or information-content which is expressed by a declarative statement which can be true or false" (Glossop, 1974, p. 236). Because they will be generated via the Kelly Repertory Grid Technique (Kelly, 1955), they will represent the subject's hypotheses concerning the world.

Hinkle's laddering technique was employed to help subjects interrelate their beliefs, somewhat, into a system (Hinkle, 1965; Pope and Keen, 1981; Wodlinger, 1985). The Kelly technique was used, as opposed to surveys, because it is a way to map out the educational beliefs of teachers from the perspective of the teachers themselves. The Kelly interviews were done with the student teachers one week before the student teaching experience began and during the last week of the student teaching experience.

The Munby adaptation of the Kelly technique involves two interviews of around one hour each. In the first interview, the teacher lists concrete teaching practices (elements), and then groups and organizes the individual practices into broader frames of thought called constructs. The elements and constructs are put on a grid with the elements on top and the constructs on the side. The teacher is then told to rate the elements based on which end of the construct they tend toward. The completion of the grid concludes the first interview. Each grid was then cluster analyzed using the SIMPLE FOCUS program (Thomas and Harri-Augstein, 1982).

In a second interview (around an hour), the researcher and teacher explore the FOCUS output to develop the principles within the teacher's belief system that affect instruction. The teacher is asked to talk about the groupings of elements and constructs. The interviewer uses the analyzed grid as the basis of his questioning and thusly minimizes interviewer talk and maximizes subject talk. The second interview was audiotaped and analyzed for clear statements of principles stated by the teacher in the form of propositional statements. An example of such a proposition might be: "In a less threatening atmosphere, students enjoy what they are doing."

B. Semistructured Interviews

In addition to the Kelly technique, semistructured interviews (Borg and Gall, 1983) were used with the student teacher during the course of the experience at five week intervals (approximately 30 minutes each). According to Borg and Gall, in a semistructured interview, "the interviewer first asks a series of structured questions and then probes more deeply, using open-ended questions in order to obtain more data" (p. 442). Interview schedules changed in order to explore emerging hypotheses concerning the development of beliefs and practices in relation to each other. For an example of one such schedule, see Figure 1 in Appendix A. These semistructured

interviews were done by a research assistant. Theme analysis was employed to analyze data related to interviews.

C. Student Journals and Platform Exercise

A journal of reflections during the actual student teaching experience and educational platforms written during methods courses were the final methods used to examine the beliefs of the student teachers. The university supervisor directed the student teachers to write about their experiences in the journal. The student journal and platforms were theme analyzed for important issues related to the beliefs/practice relationship.

METHODOLOGIES USED TO OBSERVE AND ANALYZE INSTRUCTION

The instruction of the student teacher was observed and analyzed using participant observation methods. With the exception of the first week when the student teacher was playing the role of the observer, student teachers were observed for approximately five class periods a week, every week, during the course of the student teaching experience at a variety of times (e.g. in different classes and at different times during the day).

Throughout the course of the classroom observation, the research played the role of passive participant. "The ethnographer engaged in passive participation is present at the scene of action but does not participate or interact with other people to any great extent" (Spradley, 1980, p. 59). The observation begins with what Spradley calls, the grand tour. It continues with a narrowing focus, primarily lesson structures and student behaviors.

The outcome of the observation is to understand the cultural themes which flow throughout the student teacher's classroom. Spradley defines cultural theme as "Any principle recurrent in a number of domains, tacit or explicit, and serving as a relationship among subsystems of cultural meaning" (Spradley, 1980, p. 141). Cultural themes emerge as the researcher immerses himself in the situation. What

is ultimately discovered is the system of meaning integrated into the patterns observed.

FINAL ANALYSIS

The methods described in the previous sections yielded a tremendous amount of data. As stated previously, hypotheses related to the research questions evolved throughout the course of the study. In the final analysis, competing hypotheses for each research question were listed. Under each question, pertinent data supporting and not supporting each hypothesis were listed. The primary researcher determined which hypotheses were supported by substantial data and which were not supported or were refuted by the data. Viable hypotheses will be discussed in the final section.

CONTEXTUAL ISSUES

The questions related to beliefs and practices explored in this paper represent a part of a research study. The other questions explored in this study related to the factors influencing the development of the beliefs/practices relationship (Mayer, 1987). When the original proposal for this paper was written, it seemed that these two sets of questions could be explored separately. It is as if the researchers needed to be convinced of their own preconceived beliefs concerning the importance of context in social-anthropological inquiry. Nonetheless, some insight can be gained by separating the questions. The yield of such an endeavor is a description of the beliefs/practices development of the two student teachers. By leaving out a discussion of influences, it is unclear as to why the beliefs and practices developed in the way they did. The main purpose of this paper is to describe the development of beliefs and practices. To add some explanation to that description, data related to the other questions will be referred to in the final discussion section.

To facilitate that discussion, a very brief overview of the methodology related to the questions concerning influence is presented. Kelly interviews were done at the start of the student teaching experience with both cooperating teachers.

Semistructured interviews were done with cooperating teachers at the end of the student teaching experience, university supervisors after the student teaching experience and with methods course instructors before the student teaching experience. Cooperating teachers were observed by approximately 5 class periods at the start of the experience. Methods course documents were also examined.

SUBJECTS AND SETTING

The subjects were two student teachers involved in working on baccalaureate degrees in secondary education at The Pennsylvania State University, University Park (College of Education). At the time of the student teaching experience, Karen was 49 and Mary was 20. Karen is a mother of three (boys) and the grandmother of 6. Her age clearly made Karen an untypical subject. Mary, though younger, had grown up in a small city and had a good deal of experience working with inner city youngsters. Karen taught senior English in a nearby high school. The high school was in a small rural town. Her cooperating teacher, Mr. Gron was a male and was the head of the department. Mary taught in a junior high school in the university town. Her cooperating teacher, Ms. Dodge was a young (early 40's) vigorous woman.

The Penn State teacher education program includes a good deal of field work (2 experiences before student teaching). Before their student teaching experience, preservice teachers take two sets of methods courses, one which focuses on generic teaching methods (CI 411/412) and another which focuses on methods related to the area of concentration (RCLEd 411/412). A good deal of reflection is built into the program in the form of journal writing, written statements of philosophy and written analyses of microteaching experiences. Emily was the course instructor for the general methods course and Dr. Gold was the instructor for english methods.

KAREN'S CASE STUDY

Introduction

This chapter begins with a discussion of Karen's beliefs at the start of the student teaching experience, continues with a description of the beliefs/practice

development during the student teaching experience and a discussion of Karen's beliefs at the start of the student teaching experience, continues with a description of the beliefs/practice development during the student teaching experience and a discussion of Karen's beliefs at the end of the experience. It concludes with an overall discussion of the relationship between Karen's beliefs and practices.

What are important beliefs related to education held by Karen at the start of the students teaching experience?

The data which the following analysis is based on came from the first set of Kelly interviews done with Karen one week before the student teaching experience began. In addition, platform exercises written during CI 411/412 coursework were examined.

In the first Kelly interview, Karen generated 18 elements. Eleven related to teacher behaviors. Seven related to student behaviors. She also generated 6 constructs (See Figure 2 in appendix).

From Karen's second interview, 29 separate belief statements related to education were distilled (See Figure 3 in the appendix).

In addition to the Kelly interview, a second data source for Karen's beliefs comes from platforms which she wrote during the CI 411/412 coursework. Karen's Kelly interview matched issues she discussed in her platform exercises. The focus of this discussion, therefore shall be on her Kelly interview. (Note: Letters presented after the quote indicate which interview the quote comes from. See Figure 10 in the appendix.)

There is a unity of thought in Karen's talk about education. These thoughts can be summarized as follows:

1) A teacher must come to know her students in a personal manner so that she can teach to all of them.

"Like I said before, get to know your students. You don't have to be direct by saying: 'Are you from a broken home?', but you could find out... Are they from a home where people don't care? Do they have enough to eat? Are they being abused?" (L)

"A good teacher would try to teach to all students. You don't have to teach to the ones that want to learn, you have to teach to the ones who don't want to learn and don't want to be there. They're the ones you have to get at. The rest, forget it....That's where the core is. They're bored, let's face it." (L)

2) Small group instruction and a high degree of student interaction are mechanisms for getting students to communicate with one another. By doing this, students learn about respective differences in their peers and to value these differences.

"Let them learn from one another and about each other. Small group work is a very important part of any classroom. Some like this lecture. I definitely frown on this teacher lecture." (L)

3) Employ the language arts approach. Deemphasize grammar and emphasize the interrelationship of reading, writing, listening and speaking to real life. Give the students choice related to writing and reading. "To a certain extent, textbooks are fine. But let's say, why not say to the students what do you like to read: newspapers, magazines, what are the current less expensive paperbacks out by famous writers, the science fiction. What interests you? What do you like to read? Draw on that." (L)

4) If a teacher starts to fall into a rut, her instruction will reflect this and become boring.

"That's the teacher who uses the textbook and 'Let's go to the end of the chapter and write out the question every day,' or in math class, 'Let's do every odd

one'...' or, I got the same things from ten years ago. I might as well teach them the same way again this year." (L)

Karen tied all of this together in her platform statement when she said that she wanted all students to become "self-sufficient" and leave their "mark on the world." Karen, as a teacher, wants to open herself to wherever students are when they come into her class and help them develop into the best people they can. There is no predefined mold for the notion of "best." Each person is unique and must develop in her own unique way.

To what extent do Karen's teaching practices develop as a result of the student teaching experience?

During week 1 of student teaching (9/2-9/5), Karen observed Mr. Gron and other teachers in the school teach. She began teaching the week of September 8 (week 2). Throughout this week she taught one section. The next week (week 3), the week of September 15, she picked up a second class. These two classes, which Karen taught throughout the student teaching experience, were 12th grade nonacademic classes. Throughout Karen's experience, the students read short stories from different countries and also studied vocabulary words from the stories.

On the first day Karen was observed teaching (9/11-week 2), she began by having the students sit in a circle to have a discussion about a story. The story was about a young man of 16 who had sailed around the world. The young boy hated school. Karen, in her questioning, tried to relate themes in the stories to the lives of the students. For instance, she asked the students to discuss their feelings about school. Students were disruptive during the discussion. Field notes indicate that students were talking to each other rather than participating in the discussion. When the teacher asked them to be quiet they ignored her. The discussion went on the entire class period with a break in the middle to read parts of the story.

The next day, the students sat in rows. The first activity for the students was a test on the story at a memory/recall level. After the students finished the test they immediately copied down vocabulary words from the board and looked up their definitions in a dictionary. After they finished, Karen went over the definition of each word with the students. She also asked some questions about the story. During the course of the lesson, students were involved in each task.

After these initial days, Karen's instruction began to take on patterns (See Table 1). Class periods tended to be broken up into small segments, especially during these first weeks. There was an average of 3.25 activities per class (around 3 or 4 activities) for the 12 classes observed during the weeks 1-5. The average length of each segment was 11.36 minutes. Throughout the student teaching experience, beginning in the first five weeks one teaching activity dominated. That was teacher questioning. The main characteristics which typified this approach were teacher questions (mainly at a low cognitive level, but including some divergent and evaluative questions) followed by short student answers. This was true in discussions of stories as well as vocabulary. Student responses generally ranged from a phrase to a sentence. The questioning took place in a whole class context with students responding to teacher questioning. Eighty-three percent of the class time observed (10 out of 12 classes) during the first five weeks included this approach. The question sessions ranged from 5 to 23 minutes but averaged 11.35 minutes. (Class periods were 42 minutes long.)

In terms of participation during these activities, Karen engendered some student participation in classes. In two classes where Ribble scales were done .34 and .17 of the interaction was carried out by students in the respective classes. In 2 classes where seating chart tallies were kept, .68 and .30 of the students in each respective class participated.

In the question sessions, Karen did things to attempt to make the learning more meaningful for the students. For instance, when teaching vocabulary sessions,

Table 1

Karen's Teaching Patterns in Terms of Number and Length of Activities

		A	B	C	D*	E	F	G	H	I	J	K	L	M
Week 2-4 (13 classes)	# of activities (classes)**	39(12)	17(10)	4(4)	9(9)	0(0)	4(4)	7(6)	1(1)	0(0)	2(2)	2(2)	0(0)	2(2)
	Average Length in Minutes	11.36	11.35	15.75	1.80	0	7.75	7.14	40	0	17	7.50	0	8.50
Week 6-10 (20 classes)	# of activities (classes)	49(20)	28(16)	0(0)	4(4)	0(0)	0(0)	4(4)	0(0)	3(3)	2(2)	3(3)	2(2)	7(7)
	Average Length in Minutes	13.76	14.21	0	5	0	0	16.50	0	20.30	13.50	8	42	5.83
Week 11-15 (14 classes)	# of activities (classes)	30(14)	12(11)	0(0)	9(9)	3(3)	0(0)	2(2)	0(0)	7(6)	6(6)	0(0)	0(0)	0(0)
	Average Length in Minutes	15.09	13.31	0	3.40	8.30	0	10	0	15.71	21.00	0	0	0
Total (46 classes)	# of activities (classes)	118(47)	57(38)	4(4)	22(22)	3(3)	4(4)	13(12)	1(1)	10(9)	10(10)	5(5)	2(2)	9(9)
	Average Length in Minutes	13.57	13.19	15.75	3.19	8.33	7.75	10.46	40	17.1	18.7	8	42	6.4

A - All Activities
B - Question Sesssons
C - Small Group
D - Introduction
E - Information Presentation
F - Student Presentation
G - Individual Seatwork
H - Circle Discussion
I - Reading Quiet or Aloud
J - Reading Plus Lecture/Recitation
K - Directions
L - Trial
M - Quiz or Test

*Introductions were not figured in with total number of activities.

**Number of classes in parentheses indicates the total number of classes this activity appeared in for the week.

she showed how words were used in the context of stories. In discussing stories, she tried to bring up issues that would interest the students. For instance, in the story about the young sailor who hated school, students in class discussed their feelings about school.

An important activity during this first five weeks was the small group. This activity appeared in 4 of the 12 sessions observed, but took up much of the period in each session. In these activities, the students were given a set of questions or tasks and were asked to work on them in groups of around 4. On one occasion, they answered questions about a story. They then presented their work to the whole class.

The only other significant activities during these first five weeks were individual seatwork and in-class reading, silently or aloud. Individual seatwork involved students sitting quietly at their seats doing some work by themselves, generally related to vocabulary lessons. Students would either be copying words from the board or writing definitions from the dictionary. During the first 12 class periods observed, 6 contained at least 1 individual seatwork activity. Silent reading plus teacher questioning occurred in two classes observed.

Classroom management was an issue for Karen from the start. As with the circle discussion, students would call out or talk quietly to one another during discussion. She developed a response to this. For instance, after the circle discussion at the start of the experience where students were talking, Karen responded by having a more structured class. In addition, Karen would make comments to the students such as: "Enough talking" or "A few have not finished so be quiet and work on vocabulary." At other times, misbehavior would be ignored. Six out of the 12 classes observed contained some behavior issues.

The Development of Karen's Practices and Beliefs (the Last 10 Weeks)

Looking at Table 1, it is possible to observe certain simple trends in Karen's practice. Questioning continued to be an important strategy, maintaining the same characteristics as those described for the first five weeks. Activities which engendered student to student interaction, such as small group, dropped out. The only exception to this was a simulated trial done during the middle five weeks. In place of this, reading in class became more prominent. During the last five weeks, 13 of 14 classes had some reading (aloud or silently), either with or without a question session. Overall, Karen moved in the direction of a classroom dominated by the teacher. Student interaction was controlled by teacher direction, questions, and informal presentations.

In terms of beliefs, two semistructured interviews done at week 5 and 10 revealed little change in beliefs. For instance, in interview 1, Karen was asked to discuss beliefs which she felt should guide the instruction of good teachers. She responded by saying that teachers need to know their students and care about their students. "I've said this before. First, when you're teaching, the first thing you have to do is know your kids. Then, know what's important to them, what will help them when they get out of school. Care about people...You have to care about the individual in that seat...I care about those kids. Somebody's got to care about them in this world."(M) She also reflected in her talk a belief in small group decision making. These reflect key themes stated in the first Kelly interview.

In the first Kelly interview, Karen was asked to talk about whether or not she felt she was carrying out her beliefs in the classroom. She quickly stated that she felt that she was unable to do this completely because she thought that it would be unfair to the students to totally alter the environment for fifteen weeks and then leave. "I haven't even begun. Hey, I'm only there fifteen weeks. What can you do? I can't go in there and create a whole new environment and then leave my coop and the students becoming dissatisfied the balance of the year." (M)

In her second semistructured interview, no new themes were presented by Karen. She talked about the need to come to know students without preconceived notions and to show them that you care. She talked about rejecting lecture and favoring guided discovery. As reflected in the two semistructured interviews, Karen's beliefs did not change significantly during the student teaching experience.

What are important beliefs related to education held by Karen at the end of the student teaching experience?

The date on which the following analysis is based came from the second set of Kelly interviews done with Karen the weekend before the student teaching experience ended (End of Week 14).

In the first interview, Karen generated 17 elements. Eight related to student behaviors and nine related to teacher behaviors. In the same interview, she generated 6 constructs (See Figure 4 in the appendix). In the second interview, Karen revealed 22 beliefs (See Figure 5 in the appendix). The core of Karen's ideas from this interview are presented below:

1) The broad function of school is to make students into better adults. "Everything that they do should related to their future experiences." (N)

2) Through teacher modelling, students can learn positive values and behaviors or negative values and behaviors. When Karen talked about learning, it frequently related to affective growth in her students. "...or insulting a student in front of his peers, instead of having a private conversation. So if they go out and they're an employer, maybe they'll use that same approach for people that are working for them. They'll take that out with them. With people they're working for in business or in front of their children's friends. Just their actions, their attitudes. I'm not talking about things they're reading in books...I'm talking about their behaviors." (N)

3) Teachers need to show students that they care. This helps students feel important.

When asked about being concerned with student emotions, Karen stated: "Well, you have to be. How can you not be? Emotions of all people, not just students." (N)

"Everyone likes to fee as though they're important, somebody cares enough about them to give them the time." (N)

4) Individual instruction allows you to know your students and deal with individual needs.

"But I love individual instruction. I just think it's fantastic. Gives you a chance to know your student. You can find out where they're coming from. Give them motivation. Know their strengths and weaknesses. Especially their weaknesses because no one likes to tell them in front of an entire group." (N)

"You can't possibly give instruction to 30 students and reach every one of them. There are different levels and what you're saying to one might go right over their head and the others are bored to death." (N)

5) Through group work, students can help each other.

"When you put them in groups of two, very good activity. Just like if they're doing an essay, they can red to one another. Give each other ideas. Does this sentence make sense?" (N)

In summary, Karen believes that teachers must accept students as they are and help them develop into worthy adults. In discussing the development of her students, she means personal and emotional development. Her preferred style for dealing with the student's individual needs are small group and individualized instruction.

To what extent do Karen's beliefs related to education change during the student teaching experience?

During the course of the student teaching experience, little seemed to change in terms of beliefs, as evidenced by Karen's prestudent teaching Kelly interview and her poststudent teaching Kelly interview. The strongest similarity between the first and final Kelly interview is the theme of the individual. There is a sense in both that instruction must be based on individual need. In the second interview there is a more clearly stated rationale for this. Students come to school shaped by their environments and sometimes the outcome of such shaping is not positive. Teachers, therefore, must not judge, but rather they must accept the students where they are and help them develop positively.

In both the first and final interview, Karen suggests that instruction should be based on individual needs. In the first, she strongly endorses small group work and a high degree of student instruction and student choice. In the second she also talks about small group, endorsing the value of student to student interaction. She spends a lot more time discussing individualizing instruction. She also discusses using curricular materials which have relevancy for the students. The strategy shift in the final interview seems insignificant in light of the fact that the focus from both interviews is how best to shape instruction to meet individual student needs.

Karen's description of what education should do for the individual deepens from the first to the last interview but does not change dramatically. In the first interview, Karen wants her students to develop into the best people they can. In the final interview, Karen has a clearer sense of what this means. She desires her students to grow up into adults with positive values such as respect for the trust in others. She wants them to take responsibility for their own learning as students so that they will be better and happier citizens.

Overall, Karen's educational or beliefs do not change significantly.

RESEARCH QUESTIONS (KAREN)

1. To what extent do Karen's beliefs influence the development of her teaching practice?

Karen's practice moved away from her beliefs. Her beliefs remained fairly consistent throughout the experience. She saw a need to make learning relevant to the personal needs of her students so that they could develop into adults. Some of the questioning she employed did in fact attempt to get students to discuss personal concerns such as drug use and feelings toward school. Karen gathered a good deal of information so that she could better understand the personal needs of her students. It is not clear, however, that this knowledge was reflected in instruction. In the first Kelly interview, Karen professed her belief in small group and a high level of student involvement. By the end she maintained her belief in small group and added individualized instruction as a favored practice. Though not mentioned before, Karen did work one to one with one student in her class as part of her student teaching assignment. During the first five weeks of student teaching Karen did employ small group. This practice was not observed after that. Karen did not employ the techniques she described as most favored in her belief system. Overall, Karen's beliefs had impact on her practice during the first five weeks. This impact lessened as the experience continued. Beliefs had only a minor impact on Karen's instruction.

2. To what extent do Karen's teaching practices influence the development of her beliefs?

The first issue is did Karen's beliefs change? They remained constant throughout the student teaching experience and were only expanded upon in the final interview. There was a clearer definition of her perception of the final goals of education. She wanted her students to become adults with positive values (respect for others, responsibility). She also came away believing in individualized instruction. These reflect only minor shifts in belief so if practice did influence belief it would be in a minor way. Beyond that, it is difficult to say whether or not practice influenced belief.

3. To what extent is there an interaction effect in the development of Karen's beliefs and teaching practices?

It seems like there was little or no interaction. Karen came into student teaching with a strong set of beliefs. These beliefs directed her practice at the start of student teaching and less so as the experience continued. Her practices and beliefs diverged. Her beliefs changed only slightly. It is possible to conclude based on all of this that there was little or no interaction in the development of Karen's beliefs and practices.

MARY'S CASE STUDY

Introduction

This chapter begins before Mary's student teaching experience with a reporting of data from the first set of Kelly interviews. The chapter continues with a presentation of findings from data related to Mary's student teaching experience. A description of Mary's beliefs at the end of student teaching is then presented. The case study ends with a discussion of the development of Mary's beliefs and practices in relation to one another.

What are important beliefs related to education, held by Mary at the start of the student teaching experience?

The data for the following analysis comes from the first set of Kelly interviews done with Mary one week before the student teaching experience began. In the first Kelly interview, Mary generated 15 elements. Seven related to teacher behaviors and 8 related to student behaviors. She generated 6 constructs. (See Figure 6 in the appendix).

In the second interview done before the student teaching experience, Mary yielded 36 belief statements related to education. (See Figure 7 in the appendix).

Several broad themes emerge from Mary's belief statements.

1. The role of the teacher is to be highly organized so that she can motivate the students and keep them on task.

"And I think the teacher's job is to be organized and to plan lessons, and then to devote as much time as possible to attending to the students. To getting the students involved in the lesson, thinking up ways to get the students interested and keep them interested. Designing activities that keep the class moving along." (0)

2. Student offtask behavior interferes with learning.

"Not that talking to other kids is necessarily bad, but if they're supposed to be doing something else at the time like silent reading, and you hear a lot of whispering going on, sharpening the pencils when they don't even need them, it's going to interfere with the learning." (0)

3. The need for teacher organization rises out of the need to teach the curriculum. It is important to meet curricular goals because that allows students to fit better into society.

"And if the students are not on task, you're not going to be able to meet curricular demands..."

"Well, the broad curriculum is supposedly designed to help students fit into society better. If they've chosen the vo-tech curriculum or the academic curriculum, or whatever, they've chosen for themselves a set of goals....Curricular designs are designed to help students meet their individual goals and to help them succeed." (0)

4. "Good solid activities" such as small group work, whole class discussions,role playing and simulation promote meaningful student learning.

"It's more like critical thinking,I think. Where a kid learns to solve problems and to think logically." Mary describing a group of boys she worked with in the summer as an example of the benefits of small group work: "And they did it in what

would be a small group work. Saying what do you think? And they learned cooperation and social skills and more than anything else working independently and being able to figure things out without someone saying well this and this and this." (0)

5. Employing an integrated language arts approach in the teaching of English helps to relate learning to real life.

"I have a language arts approach to English. There's four facets to language arts: reading, writing, speaking and listening. And those are four tools that a kid is going to have to use throughout his life, no matter what job he has. He's going to have to listen to directions, and when he's in management...you have to be able to communicate...." (0)

6. The purpose of schooling is to help students reach their highest potential in whatever area of life they have chosen.

"...then I think when the students graduate high school, he should be able to step into whatever area of life he has chosen for himself, and be able to be productive and earn a decent living and reach whatever goals and reach his highest potential." (0)

There seems to be a tension in Mary's thinking. Her talk about organization and structure reflects a teacher centeredness. The talk about "solid learning activities" reflects a student centeredness. On the one hand, the teacher must be well organized and in control so that the students are on-task. On the other hand, the students need to be able to problem solve on their own without someone telling them how to do it.

To what extent do Mary's teaching practices develop as a result of the student teaching experience? (The First Five Weeks)

During week one (9/2-9/5) of the student teaching experience, Mary observed her cooperating teacher, Ms. Dodge, as well as teachers in other classrooms. She

did not do any of her own teaching. Mary began teaching week 2 (9/8-9/2). During this week she taught 2 different sections. Mary taught all eighth graders. Period 4 was an A track (academic/collegebound) class and period 6 was a C track class (nonacademic). Class periods were 42 minutes in length. Ms. Dodge taught the A track class which met period 2 and the C track class which met period 5, Mary then emulated the teaching patterns employed by Ms. Dodge in her own sections. She would use the same materials, most of which Ms. Dodge had created. For instance, on September 8 (week 2) Ms. Dodge taught her C track class, period 5. In that class, she gave a mock spelling test (8 minutes). Next they did a lecture/recitation exercise (19 minutes) where they worked on prepositional phrases in sentences. Students did some prepositional phrase activities, quietly by themselves (9 minutes). The class ended with a quick quiz (3 minutes). Mary taught the C track class period 6. During that class she gave a mock spelling quiz (10 minutes), a lecture/recitation on prepositional phrases (19 minutes), seatwork on prepositional phrases (11 minutes) and a quick quiz (3 minutes). In her interview 1, Mary stated: "In the beginning, the lessons were pretty much Ms. Dodge's lessons." (P)

In terms of subject matter, on Monday a new vocabulary lesson was introduced and on Wednesday the students would take a test on the vocabulary words which lasted much of the period. On Tuesday, Thursday, and Friday the focus was on grammar, specifically, prepositional phrases.

Out of the fifteen classes observed during the first four weeks, the largest amount of time was given over to lecture/recitation (172 minutes), with quizzes following a close second (160), and independent seatwork coming in third (114 minutes). (See Table 2). The individual seatwork and lecture/recitation tended to be shorter in nature while occurring more often during a class period. Mary's classes generally consisted of a number of short activities. There was a lot of independent

Table 2

Mary's Teaching Patterns in Terms of Number and Length of Activity

		A	B	C	D	E	F	G	H
Week 2-4 (13 classes)	# of activities (classes)*	49(13)	18(10)	13(10)	3(3)	11(11)	2(2)	2(2)	0
	Average Length in Minutes	9.96	8.61	8.77	3.33	16.09	2.50	14	0
Week 5 (2 classes)	# of activities (classes)	7(2)	4(2)	0	0	0	0	1(1)	2(2)
	Average Length in Minutes	10.86	4.25	0	0	0	0	12	23.5
Week 2-5 (15 classes)	# of activities (classes)	56(15)	22(12)	13(10)	3(3)	11(11)	2(2)	3(3)	2(2)
	Average Length in Minutes	10.24	7.82	8.77	3.33	16.09	2.50	13.33	23.5
Week 6-8 (11 classes)	# of activities (classes)	30(11)	6(6)	10(7)	4(4)	4(4)	0(0)	0(0)	6(6)
	Average Length in Minutes	14.90	6.83	14.80	5.00	21.75	0	0	23.17
Total (26 classes)	# of activities (classes)	86(26)	28(18)	23(17)	7(7)	15(15)	2(2)	3(3)	8(8)
	Average Length in Minutes	11.56	7.61	11.39	4.29	17.6	2.5	13.33	23.25

A = All Activities
B = Lecture/Recitation
C = Independent Seatwork (Quiet)
D = Informing
E = Quiz
F = Directing
G = Read Play
H = Small Group Work

*Number of classes in parentheses indicates the total number of classes this activity appeared in for the week.

skills practice supplemented by guided practice through individual help or lecture/recitation. While students worked independently, Mary wandered around the room working with individual students or had them come up to the desk. Interaction in class was typically generated by teacher questions, generally at a knowledge or low application level. Class began right on time. When the students moved from activity to activity there was little time wasted in the transitions. Classes went to the very end of the periods.

By week 4 (9/22-9/26), Mary was teaching all 5 of Ms. Dodge's classes. This week was a transitional week in that certain changes began to occur in Mary's teaching. One change occurring week 4 was Mary had an activity for the students to do written up on the board. Students were to start this activity the minute they came in the room. A second change involved an increased use of small group activity. In groups of three, students completed grammar activities. The final change noticed the week of September 22 concerned discipline issues. The first significant problems occurring involved classes that were noisy, with particular students being very loud. Mary was forced to take measures to deal with these problems. She would verbally warn students or throw students out of class.

Final 3 Weeks (Practices)

During the final three weeks of Mary's student teaching, stylistic changes occurred because the subject matter changed. Monday and Wednesday were still focused on vocabulary lessons and tests. On the other days, the focus was on essay writing. This created a change in the structure of activities. Small group became an important activity for Mary at this time and lecture/recitation became a much less significant activity. Students worked in groups of 2 or 3, checking each other's writing with preordained criteria, or writing essays collectively. Ms. Dodge helped Mary to structure small group activities. She suggested to Mary which students she thought would work best together. She helped Mary to watch all students in the

class when she was working with one group. In addition, class periods consisted of fewer but longer segments (See Table 2).

Discipline became much more of an issue for Mary during week 6 and 7. Students were noisier in class. Mary's responses to misbehavior included telling students to quiet down, shushing them, moving them to the back of the class or having students leave class.

An important external event occurred on October 14 affected Mary's teaching for the rest of her experience. Mary's supervisor observed a class which presented significant behavior problems. Also, Mary had not been turning in assignments to her supervisor. In a formal letter and informal discussions, the supervisor indicated that Mary was having significant problems in student teaching and would have a difficult time earning more than a "c" in student teaching. At the end of week 8, Mary dropped out of student teaching.

The Development of Mary's Beliefs

During week 4 of the experience, Mary was interviewed (interview 1). Mary identified four beliefs which were important to her:

1) "The main thing that I think is really important is for the classroom to be student entered."

2) "There has to be a certain amount of responsibility layed on them by the teacher cause otherwise they'll never learn to take it on themselves." Mary identifies certain responsibilities she "layed" on her students including responsibility for their behavior, getting their assignments done and ultimately "learning how to learn."

3) "You can't be too directive with students...You have to let them figure things out for themselves."

4) "Learning should be relative to the students"(0)

These four beliefs convey Mary's desire to have a student centered classroom,

where students take on responsibility for their own learning because learning has a relevance to the student's lives. Mary continued to develop student centered beliefs which was reflected in the next interview held on week 7.

Mary explains much of her behavior during the first 5 weeks in this statement: "Up till now most of the teaching has been based on what Ms. Dodge would like me to do." (P) Things changed, however during week 4: "It's been really good this week because...I've still been teaching you know along the same guidelines of exactly what Ms. Dodge taught each day. But I've been able to add a lot of my own influences." (P)

What are important beliefs related to education held by Mary at the end of the student teaching experience?

During week 9, three days after the student teaching experience ended, Mary participated in a second set of Kelly grid interviews following the same procedures as those done before.

In the first part of the final interview, Mary generated 17 elements. Ten related to students. Six related to teachers. One related to neither. In the final Kelly interview, Mary generated 8 constructs. (See Figure 8 in the appendix). Mary's talk revealed 38 beliefs related to education. These beliefs are presented in Figure 9.

There was a high degree of unity in Mary's talk during this final part of the interview:

1) Learning occurs in a student centered classroom because the emphasis is on letting students think and discover things for themselves by taking on more responsibility. This makes a student centered classroom more like real life which in turn makes learning more meaningful.

"I think that for learning to be more meaningful you have to have a student centered classroom to get them more involved and help them see the relationship

between what you are trying to teach them and their lives. That's what I take meaningful to be that they can see the point in why they are doing something and I think they're going to see that point a little more clearly if they're actively involved rather than your telling them: 'Well look, this is why it's good for you.'" (P).

2) It is the teacher's responsibility to make sure that the activities (student centered) are well designed so the students will stay on-task.

"So it (instruction) has to be well designed and you have to have thought out all the points that might happen, that might hinder the student from discovering what you want them to, take care of that so that it doesn't happen." (Q)

3) The purpose of small group activities is to teach students how to think for themselves.

"Because you need a lot of group interaction and students thinking for themselves and helping each other make decisions, and getting a lot of interaction before they make decisions..." (Q)

4) The whole point of a democracy is that everyone is capable of attaining whatever goals they set for themselves. Small group teaches the skills that citizens of a democracy will need.

"And I think that related very well because in America especially, there are hundreds of decisions that people are asked to make. About how they want to be governed, what church they want to go to, whether they want to go to church at all. If kids are told continually what the best choice is, they're not going to be able to take an active role in their society."(Q)

5) It is more important that students enjoy reading than it is for students to analyze what they read. Students learn to write by writing, reading other people's writing and getting feedback.

6) In a junior high classroom, it is likely that there will be some misbehavior.

"Especially in a junior high class, I mean how do you get rid of them (discipline issues)? I don't think you can." (Q)

7) Use a light touch in disciplining students. Respond to the individual need of each student so they will not misbehave.

"But I don't think you can confront a kid, whether physically or verbally because they want to save face...You have to meet the kids needs whatever they are." (Q)

Overall, Mary's talk about teaching because more unified by the end of the experience. She endorsed a well designed student centered (small group) approach that got the students involved and interacting, thus making learning more meaningful. Mary felt that the student centered approach created thoughtful students, necessary for a democracy.

Research Questions (Mary)

1. To what extent do Mary's beliefs influence the development of her practice?

Initially, Mary's beliefs did not seem to influence her practice. For instance, in her first Kelly interview, she discussed her belief in the language arts approach. During the first five weeks of student teaching she violated this notion by teaching grammar as a subject unto itself and did not relate it to language usage such as writing or speaking. In addition, during the first Kelly interview, Mary discussed her beliefs in small group and active student involvement. During the first four weeks, her instruction was very teacher centered through lecture/recitation and guided practice. Starting with the fifth week of the experience, Mary's beliefs had a more significant impact on her practice. She used small group with both her grammar instruction and later her writing instruction. Small groups, very important in Mary's belief system, became a very important part of her practice. The consistency between Mary's beliefs and practices grew as the experience went on.

2. To what extent do Mary's beliefs influence the development of her practice?

Mary's practice seems to have influenced her beliefs. As reflected in her second interview, Mary came to believe more strongly in a student centered approach, small group in particular. This belief became a core belief as reflected in Mary's final interview. It is very possible that the firmness of this belief resulted from practice. Overall, Mary's experience with small group was positive. This seems to have reinforced her belief concerning small group which she had when she came into student teaching. In addition, Ms. Dodge worked with Mary to help her develop groups and maintenance procedures for small group activities. Ms. Dodge helped Mary pick students that would work well together and helped her keep an eye on all students during small group so that she could keep students on task. These practices may have encouraged Mary to see how well designed activities are a necessary aspect of a student centered approach. The need for careful structuring of activities was subsumed under the belief in a student centered approach. Practices seemed to have influenced the development of that belief.

3. To what extent is there an interaction effect in the development of Mary's beliefs?

Mary came into the experience with a dichotomous set of beliefs. She believed in the need for teacher directiveness in order to keep the students on task, as well as a need for student decision making in small group. Her successful practice with small group had an influence on her beliefs which she came into the experience with, allowing her to successfully integrate the once apparently dichotomous notions. This is an indication of the fact that in their development, Mary's beliefs and practices interacted with one another.

HYPOTHESES

Several important hypotheses, worthy of further research are suggested by the findings.

HYPOTHESIS 1: Student teachers start and and their student teaching experiences with a set of idiosyneratic beliefs.

This is supported by the beliefs of both student teachers generated by the first and second set of Kelly interviews. This lends support to earlier findings coming out of research by Tabachnik, Popkewitz, and Zeichner (1980) and others.

HYPOTHESIS 2: The beliefs of student teachers evolve over the course of the student teaching experience.

There were changes in Mary and Karen's beliefs. Changes grew out of beliefs stated at the start of the student teaching experience. Mary's case is the more dramatic. Her teacher organization/student centered classroom dichotomy did not disappear. Rather, the structure of her beliefs changed in that student centered classroom became a unifying idea. Teacher organization was subsumed under that notion as a means toward developing student centered classrooms. Karen's terminal belief in individualized instruction grew out of her belief concerning knowing your students and dealing with their individual needs.

HYPOTHESIS 3: The beliefs of student teachers do not become more custodial and less humanistic as a result of the student teaching experience.

Both student teachers came out of the experience with beliefs in a student centered approach either through small groups or in Karen's case with individualized instruction. Both maintained their belief that students could function in such a classroom. Mary was reinforced in her belief that teachers need to use a light touch with discipline. This contradicts findings generated by the Hoy and Rees (1977) research study on the pupil control ideologies of student teachers.

HYPOTHESIS 4: The evolution of beliefs and belief systems is based on developing increasingly sophisticated definitions of key concepts in the system.

Mary demonstrated this hypothesis. Her philosophy developed around the concept of the student centered classroom. How she defined that term effected her belief system. As her definition of that term became more sophisticated, her overall belief system evolved.

HYPOTHESIS 5: Student teacher beliefs will tend not to be significantly altered when there is a consistency between broader philosophical views and the student teacher's educational beliefs.

Karen came into the student teaching experience with a set of educational beliefs which grew out of broader philosophical views. Her beliefs remained basically the same as a result of the experience. Mary came into the system with nonintegrated sets of ideas. The structure of her beliefs did change as a result of the experience.

HYPOTHESIS 6: Beliefs can serve as a guide to practice for the student teacher.

This hypothesis must be stated in a conditional manner. Karen started her experience by generating practice (small group) which reflected her belief in a student centered approach. During the last ten weeks of the experience, her practice reflected her beliefs less and less. Mary developed a student centered classroom through small group and maintained the practice until the end of the experience. This was an important part of her belief system. She also believed strongly in a language arts approach, yet taught grammar as an activity disemodied from actual language usage (reading, writing). Both manifested practice which did and did not reflect their beliefs.

HYPOTHESIS 7: Beliefs and practices can develop in relation to one another as a result of the student teaching experience.

This must also be conditional because it was the case for Mary but was not the case for Karen. Mary's student centered beliefs system seems to have grown out of her ability to carry out such a classroom. Ms. Dodge helped Mary to deal with structural issues (Keeping an eye on all students while working with one group, identifying students who would work well together in groups). This allowed her to subsume concerns with teacher organization under the rubric of a student centered classroom. Karen's practice diverged from her beliefs, therefore, it is difficult to identify ways in which her practice affected her beliefs.

DISCUSSION OF IMPLICATIONS

This study has been presented as a hypothesis generating study. It is therefore inappropriate to generalize results. Nonetheless, hypotheses stated in the previous section have implications for teacher education programs. They point to important issues in teacher education which teacher educators should consider. Based on discussions of contextual factors, others need to determine the level of transferability (Guba, 1986) to other teacher education programs.

There are implications concerning courses in methodology. As discussed previously, reflection was an important part of the method courses taken by Mary and Karen. In addition, both discussed the significant influence of Emily, their general methods course instructor (Mayer, 1987). Focusing on beliefs during their preservice experience might have contributed to the firmness with which they held onto their beliefs and used them to guide their practice. It might also explain why the two teachers did not become more custodial. There is support here for incorporating such reflection into teacher education courses. It would be beneficial to replicate a similar study in a school of education which does not have such conscious efforts at building reflective practice as a part of the curriculum. Mary's experience suggests the need for developing conceptual schemes during coursework

as the basis for developing belief systems. Mary worked with the notion of a student centered classroom.

The second set of implications relates to supervision during the time of practice. It may, in fact, have been the lack of reflection on beliefs and practices which caused such inconsistencies for Karen and lack of success for Mary. Karen's practice became more like that of her cooperating teacher. The university supervisor focused on the importance of teacher effectiveness research. There was no evidence to suggest that anyone but the researcher was focusing on her beliefs (Mayer, 1987). It is highly conceivable that if either the cooperating teacher or the supervisor had helped Karen reflect on beliefs and practice she might have maintained more of a consistency. This suggests the need for future research exploring how a reflective practice such as clinical supervision carried out by university supervisor or cooperating teacher would work in the development of the student teacher's beliefs and practices. Another option would be an intervention study whereby the researcher would more consciously intervene to effect a beliefs/practice relationship and then explore the intervention.

Finally, there is certainly a need for replication of these procedures in similar settings and other settings. This would help to explore the capacity of transferability (Guba, 1986) of results. It would also assist in testing the reliability of these procedures.

The researchers, indeed, went into the study believing strongly in the importance of helping preservice teachers to develop and utilize beliefs. This belief was reinforced by the experience and results of the study. Further, it helped to pinpoint those places in teacher education where reflection on beliefs and beliefs/practices relationship are most needed.

Beliefs seem to play an important role in the preservice teacher's development. This research suggests that greater care needs to be payed to the

development of beliefs and beliefs/practice relationships throughout the teacher education process.

FIGURE 1: INTERVIEW 1 (Mary and Karen)

1) List some of the teaching techniques you have used in the last three weeks.

2) In general, how would you characterize the type of teaching techniques you have been using?

3) How have your teaching strategies in the last few days been different from the teaching strategies you used at the start of your student teaching?
PROBES: (If it has changed) What caused your teaching strategies to change?
(If they have remained the same): Why do you think your strategies have not changed?

4) What important beliefs or principles do you feel should guide the instruction of good teachers?

5) What important beliefs or principles do you feel should guide the instruction of good teachers?
To what extent have you followed these beliefs or principles?
State specific ways you have followed or violated these beliefs or principles.

6) What factors have most greatly influenced your development as a teacher?
State specific ways these factors have influenced you.

7) Jackie: How have you been gathering information about your students? How has this information influenced your instruction?

8) Laura: What role do you feel your coop has been playing in the development of your student teaching? What do you feel about the role she has been playing?

FIGURE 2: KAREN'S CONSTRUCTS/FIRST KELLY INTERVIEW

1) Teacher deals with students as individuals - Teacher not caring.

2) Teacher controls the environment - Student to student interaction.

3) Teacher responsibility for student boredom - Teacher generates interest.

4) Teacher loves the job - Teacher works to collect paycheck only.

5) Teacher not interested in students - Teacher works from heart.

6) Poor teacher - Good teacher.

FIGURE 3: KAREN'S BELIEFS/FIRST KELLY INTERVIEW

From Karen's talk in the second interview, 29 separate belief statements related to education were distilled.

1) Teachers need to have a certain amount of control in their classrooms.

2) Students can learn as much from each other as they can from the teacher. Students know where fellow students are coming from and they feel freer with other students than they do with the teacher.

3) Learning how to express yourself is an important part of schooling.

4) Expressing yourself is important because in life you need to be able to say what you think. This is important in terms of applying for jobs as well as expressing feelings. Expressing yourself is necessary for good mental health. It is also a way that new ideas get developed.

5) You have to know your students well.

6) Everyone has something they do exceptionally well. Teachers need to draw on that.

7) Small group work is a very important part of any classroom.

8) Small group helps students to develop learning skills, communicate better, and grow emotionally.

9) Lecture is sometimes necessary, but it is not a favored method.

10) You need to be able to give and share with other people. That is an important lesson to convey to students.

11) Academics are important to teach in school but they are not everything.

12) A good teacher would try to teach to all students.

13) It is important to teach to the students who don't want to learn.

14) Let the kids have a choice of what they want to study (creative writing: choice of topics; choice of what they want to read).

15) It's important for students to say: "This teacher is interested in me."

16) Let students discuss their problems with you. Be like a "concerned parent," not "palsy-walsy."

17) You don't need a textbook to learn how to read and write.

18) Students should learn something about poetry and the famous writers.

19) Teachers need to change their curriculum and procedures from year to year in order to stay out of a rut.

20) Having student-student interaction in class encourages students to appreciate differences between each other. Students will learn to value one another and accept one another.

21) It is important to teach that just because someone is different it does not mean that they are inferior.

22) There's never going to be a paradise.

23) A teacher has to change. He must have experiences (change teaching assignments, take courses) which allow him to grow professionally. Otherwise, teachers will burn out.

24) If teachers get in a rut, the tendency is that students will get bored.

25) A big part of student boredom is the teacher's fault.

26) Don't grade all students the same.

27) Expect the best from all students.

28) If students get excited, they are likely to get involved in the classroom.

29) A noisy classroom is okay as long as it doesn't disturb other classrooms.

FIGURE 4: KAREN'S CONSTRUCTS/FINAL KELLY INTERVIEW

1) Learning which is helpful in the real world - Negative learning (Learning that will hurt students on the job).

2) Students learning - Students not learning.

3) Student positive behavior (where students take responsibility for learning) - Student bad behavior that affects other student learning.

4) Teacher pep talk/praise to individual student - Teacher insults student.

5) Teaching activities which limit student involvement - Motivating activities.

6) Addressing whole group - Individual instructor.

FIGURE 5: KAREN'S BELIEFS/FINAL KELLY INTERVIEW

In the second interview, Karen's talk revealed 22 beliefs.

1) Students are always learning something whether it be positive or negative.

2) Students can learn negative things in school from each other or from the teacher.

3) Teachers model behavior which could be mimiced by students later in life. If a teacher insults a student in front of his peers, a student may pick up on this and be like that when he is a parent or an employer.

4) Students need basic skills so that they can deal with everyday situations (leases, helping children with homework).

5) Children learn by imitation.

6) So much of what a teacher has to do is help students deal with their lives at that moment. (Many students have serious problems, such as broken homes, parent alcoholics).

7) Teachers never should say, this is the way I believe so you should believe the same way.

8) Values such as trust other people, respect your peers, respect other people's beliefs are important to teach.

9) Parents set the foundations for students which teachers must then work with.

10) All teachers related on some emotional level to their students.

11) Working with students individually is a good way to learn student strengths and weaknesses.

12) Working with students one to one is a way to give help. They would not normally get this help in a large group setting.

13) Working one to one is one way to help students who are slow learners or exceptional children.

14) Students working together is a great activity. For instance, in essay writing they can critique each others work.

15) Working individually with students helps to motivate them because the teacher is reaching them at their level and also making the student feel important.

16) Individual instruction allows the teacher to create instruction which is relevant for the individual student.

17) Students need to take responsibility for their own learning because when they become adults, they will need to do this. Specifically, they will need to learn things so that they can become better citizens.

18) The textbook should not be the sole curricular source. It needs to be mixed with other things.

19) Newspapers and magazines are good classroom sources because they have stories and articles which are relevant to the students. They are relevant because they deal with real life situations.

20) Don't look up past grades or talk to teachers about students you have. This will cause you to form preconceived notions.

21) Students are not either bad or good. They are what society made them.

22) Teachers need a lot of patience.

FIGURE 6: MARY'S CONSTRUCTS/FIRST KELLY INTERVIEW

1) Day-to-day doldrums of classroom - Student or teacher behavior which indicates learning is going on.

2) Teacher attention grabbing activities - Teacher behavior which permits student misbehavior.

3) Teacher clerical behavior (Too much or poorly planned) - Teacher organization

4) Student being on-task - Undesirable classroom behavior.

5) Teacher disorganization behavior - Teacher motivating behavior (Capturing student interest)

6) Learning activities - Clerical work.

FIGURE 7: MARY'S BELIEFS/FIRST KELLY INTERVIEW

1) If a teacher is disorganized, less learning is going on. (To Mary, disorganization sends a message to the students that the teacher doesn't care. If the teacher doesn't care the students will figure why should they care).

2) If teachers are organized and if they have clerical tasks out of the way, teachers can come up with attention-grabbing tasks that will motivate students and also there will be less student misbehavior.

3) If teachers can keep students on task for as long as their attention spans can stand it, then they're going to accomplish more (teacher learning goals, meet curricular demands).

4) If the students don't learn the curriculum, they could be behind in later years.

5) The broad curriculum is designed to help students fit into society better. (Students choose different curricula to meet their individual needs such as college or vo-tech).

6) When a student graduates from high school, he should be able to step into whatever area of life he has chosen for himself and reach his highest potential. (Potential is based on whatever goals the individual has set for himself).

7) If one's potential is not met or it is only partially satisfied, it has a negative effect on the individual's self esteem. (Later on when they meet people who have had high school opportunities where they could reach full potential, they will be at a disadvantage).

8) Student misbehavior is due to the teacher not being exciting.

9) Be unpredictable so students will come into your class interested in what is going to happen. This will provide motivation to the students which will in turn motivate the teacher to come up with more stimulating activities.

10) If the teacher uses the same curricular materials year after year, he will get bored and the students in turn will get bored).

11) The teacher's job is to be organized, plan lessons, attend to students, and get students interested in the lessons.

12) Communication skills are very vital.

13) Get learning into a form where the students see its usefulness and where they can learn it, then they will enjoy the class.

14) If students don't enjoy learning, they won't enjoy school, and they will quit and teachers won't have the opportunity to help them.

15) The bet approach is a language arts approach which includes reading, writing, speaking, and listening. These are tools for life no matter what job one has. (Language arts skills will relate to any job).

16) If students are motivated, they will be on task.

17) Teachers need to keep a little pressure on students (setting time limits for activities) to help them stay busy and on task.

18) Day-to-day doldrums can interfere with the students being on task.

19) Interruptions such as the P.A. system can interfere with learning going on in a classroom.

20) Students will be on task if their behavior indicates that they are.

21) If students are on task and it is busy work, the fact that they are on task does not mean that they are learning anything.

22) If students are involved in a good solid activity and they are on task, then learning is going on.

23) Meaningful learning activities are those that involve student understanding of what is being looked at, critical thinking, or problem-solving or it will have some application in a real life situation.

24) Busy work activities such as grammar exercises can help students (especially slower students) get the basics so they can later apply it as a tool.

25) Busy work (memory/recall activity) should be only a small part of the classroom. It should be the foundation for some higher order activity. The bulk of time should be spent on work related to understanding, critical thinking, or application (problem solving). No activity in the classroom should be done merely for the sake of doing an activity.

26) Students who already understand the concepts related to certain tasks should not be expected to do busy work activities such as grammar exercises.

27) Whenever a student is reading he is learning (improving reading skills, learning to enjoy reading).

28) Choosing a book in the library to read should be a reward for students getting their work done early. This will help students to see the library as a place where enjoyable things happen.

29) Really good learning takes place in small groups, in whose class discussions, in role-playing and in simulation.

30) Good learning activities give students a sense of why they are learning the subject being covered. This is why it is important to use grammar in the context of some writing activity.

31) Simulation activities can help students think, organize their thoughts, and develop argumentation and communication skills (writing). It can make learning more real and therefore, more enjoyable and students become more involved. (Simulation is a place to apply skills. These activities give a sense of why the student is learning what they are learning).

32) A simulation can give students confidence to carry through on what they have learned (peer teaching).

33) Small groups are important because they give students a chance to work independently and problem-solve on their own without having someone telling them exactly how to do it. This is the way it is in real life.

34) It is important to have groups that are mixed (mature and immature) so students can learn how to draw on each other's strengths.

35) Sometimes when students work in small groups they will not be able to explain what they learned right then.

36) The real positive thing about small group work is that students can learn from each other and learn to appreciate each other because they can see each other's strengths in the form of contributions to the group and begin to like those people. Students can learn the subject matter and about each other in small groups.

FIGURE 8: MARY'S CONSTRUCTS/FINAL KELLY INTERVIEW

1) Student centered classroom - Teacher centered classroom.

2) Activity poorly designed - Activity well designed.

3) Student misbehavior - Students on talk.

4) Teacher behavior encouraging student responsibility - Teacher behavior discouraging student responsibility.

5) Teacher makes decisions about what to learn - Students make decisions about what to learn.

6) Activity where learning meaningful - Activity where learning is not meaningful.

7) Let students think for themselves - Teacher thinks for students.

8) Individual learning - Group learning.

FIGURE 9: MARY'S BELIEFS/FINAL KELLY INTERVIEW

1) These four things are valuable: student centred classroom, making learning meaningful, students being on task; well designed activities.

2) A student centered classroom helps students to get more involved so they can see the relationship between what the teacher is trying to teach and their lives. A student centered classroom helps to make the learning more meaningful.

3) When students discover things on their own, they are more likely to see the learning as meaningful. This is more likely to happen in a student-centered classroom.

4) Learning will be less meaningful to the students in a teacher-centered classroom where they are told what they're going to learn.

5) Discovering an idea gives students a sense of ownership for that idea.

6) In discovery learning the teacher knows what he wants them to learn and guides them toward it.

7) It is important to design discovery lessons very carefully so students are not hindered from learning what you want them to learn.

8) If the activity is well designed and if the students are used to having the responsibility placed on them for their learning in a student-centered classroom, then they'll be on task.

9) Student offtask behavior is the fault of the teacher. Teachers need to design activities which take into account the needs of all the students.

10) While working in small groups, it is not misbehavior or off-task behavior if students go off on a tangent.

11) Making learning meaningful for students gets the excited and motivates them. They will enjoy learning and therefore want to learn more.

12) If students are motivated, they are more likely to be on task.

13) In a studentcentered classroom, students take responsibility for their own learning and they learn responsibility for their actions. This is the way it is in real life.

14) Students will get bored in a classroom if they do not see how they can apply the learning to their lives.

15) It is more important to get students to enjoy reading than it is to get them to analyze what they read.

16) It is important for students to enjoy writing.

17) Students will learn to write only if they get lots of practice and lots of feedback.

18) The teacher has to provide the atmosphere for the students to be able to make decisions.

19) Teachers have to leave room in activities for student creativity so they can learn to make decisions.

20) Critical thinking and decisionmaking are important skills that students need.

21) Letting the students think for themselves is the same as letting the students make decisions. It is important to give students practice in thinking for themselves.

22) If students are told continually what the best choice is, they're not going to be able to take an active role in their society. You can't be an active member of society without an ability to think for yourself.

23) Everyone is capable of attaining whatever goals they set for themselves. This is the whole point of a democracy.

24) All people have the ability to think for themselves and make decisions.

25) The only way to learn to write is by writing and by reading other people's writing. You don't learn to write by someone giving you a set of rules that you can or cannot follow.

26) Small group work provides an opportunity for other than the teacher to help students shape their values. It is a way to use peer pressure to your advantage, with "cut and dry" things like grammar.

27) In grading writing, teachers should grade on what the student is trying to say rather than grading on mechanics and spelling.

28) Small group work provides an opportunity for students to help each other make decisions.

29) Small group work helps students to build on each other's creativity, to draw on each other's ideas, and each other's strengths and weaknesses and expand as a person.

30) Small group helps you to learn how to think for yourself. What you are doing it asking someone else for input in making decisions. It provides an opportunity to dialogue on a decision to be made.

31) Teachers are viewed as authority figures. The things they say will be taken differently than the things a student will say. Students will be more open to challenging another student whereas he will be more likely to go along with whatever the teacher tells him.

32) Students are good at faking that they are on task.

33) If students are coming to school high or drunk, teachers have a role to make them see how stupid it is. (Put the fear of God in them and make them knock it off). It helps to be able to speak their language. Health books, and lectures won't help. Relating someone's personal experience will help.

34) Seventh and eighth graders who are into drugs need help. They don't need to be nailed.

35) Drugs aren't wrong because they violate social norms. They're wrong because they hurt kids.

36) Everytime a teacher has to reprimand a student, it interferes with the class's learning. It is better just to tell a student to go somewhere for a while.

37) Dittoes are bad. The more written down material you have for the student to lose, the harder it's going to be for him to learn.

38) In a junior high class, you need to expect some misbehavior, but you need to figure out how to cut down on it.

FIGURE 10: INTERVIEW SCHEDULE

L Karen's First Kelly Interview

M Karen's First Semistructured Interview

N Karen's Second Kelly Interview

O Mary's First Kelly Interview

P Mary's First Semistructured Interview

Q Mary's Second Kelly Interview

REFERENCES

Borg, W.R. & Gall, M.D. (1983). Educational research: An introduction. New York: Longman.

Clark, C. (1979). Choice of a model for research on teacher thinking (Research Series No. 20) East Lansing: Institute for research on teacher thinking, Michigan State University.

Clark, C.M. & Peterson, P.L. (1986). Teacher's thought processes. In M.C. Wittrock (Ed.), Handbook of Research on Teaching: Third Edition (pp. 255-296). New York: Macmillan Publishing Co.

Erickson, F. (1986). Qualitative methods in research on teaching. In M.C. Wittrock (Ed.), Handbook of Research on Teaching: Third Edition (pp. 297-314). New York: Macmillan Publishing Co.

Etheridge, G.W., James, T.L., & Bryant, G.W. (1981). Discipline beliefs of student teachers and directing teachers. Unpublished manuscript, Memphis State University, Memphis, Tennessee.

Fishbein, M. and Ajzen, I. (1981). Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, Massachusetts, Addison-Wesley Pub. Co.

Glossop, R.J (1974). Philosophy: An introduction to its problem and vocabulary. New York: Delta.

Goodman, J. (1985). Field-based experience: a study of social control and student teachers' response to institutional constraints. Journal of Education for Teaching, 11(1), 26-49.

Griffin, G.A. (1983). Executive summary, Clinical preservice teacher education: Final report of a descriptive study (Report No. 9026) Austin, Texas: The University of Texas at Austin, Research and Development Center for Teacher Education.

Guba, E. G. (1986). The development of parallel criteria for trustworthiness. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.

Hinkle, D. N. (1965). The change of personal constructs from the viewpoint of a theory of implications. Unpublished doctoral dissertation, Ohio State University.

Hoy, W. K. & Rees, R. (1977). The bureaucratic socialization of student teaches. Journal of Teacher Education, 28(1), 23-27.

Iannacocone, L. (1963). Student teaching: A transitional stage in the making of a teacher. Theory into Practice, 2, 73-80.

Kelly, G. A. (1955). The psychology of personal constructs (Vols. 1-2). New York: Norton.

Mayer, R. H. (1987). The relationship between the beliefs and practices of two student teachers and factors influencing their development: Two case studies. Unpublished doctoral dissertation, The Pennsylvania State University.

Munby, H. (1982). The place of teachers' beliefs in research on teacher thinking and decision making and on alternative methodology. Paper presented at the annual meeting of the Southwest Educational Research Association, Austin, Texas.

Munby, H. (1983). A qualitative study of teachers' beliefs and principles. Paper presented at the annual meeting of the American Educational Research Association, Montreal.

Nelson, N. J. & Ahmed A. (1972). Educational values of student teachers before and after student teaching. College Student Journal, 6(1), 72-77.

Pope, M. L. and Keen, T. R. (1981). Personal construct psychology and education. London Academic Press.

Spradley, J. P. (1980). Participant observation. New York: Holt, Rinehart and Winston.

Tabachnick, B. R., Popkewitz, T. and Zeichner. (1980). Teacher education and the professional perspectives of student teachers. Interchange, 12-29.

Thomas, L. F., Harri-Augstein, S. (1982). Simple Focus (Computer Program). Uxbridge, Middlesex: Brunel University.

Wodlinger, M. G. (1985). Entry beliefs of first-year preservice teachers. The Alberta Journal of Educational Research, 31(1), 54-69. Zeichner, K. N. (1978). The student teaching experience: A methodological critique of the research. Paper presented at the annual meeting of the Association of Teacher Educators, Las Vegas.